

METHOD OF DYEING A PLASTIC ARTICLE

ABSTRACT OF THE DISCLOSURE

In the method of the present invention a plastic article (e.g., a molded article of thermoplastic polycarbonate) is immersed at least partially in a dye bath which includes one or more dyes, water, at least one carrier, and at least one diol. The dye bath contains: (i) at least one dye (e.g., a static and/or photochromic dye); (ii) water; (iii) at least one carrier represented by the following general formula I,



wherein R is a radical selected from linear or branched C₁-C₁₈ alkyl, benzyl, benzoyl and phenyl, and n is 2 or 3; and (iv) a diol selected from at least one of linear or branched C₂-C₂₀ aliphatic diols, poly(C₂-C₄ alkylene glycol), cycloaliphatic diols having from 5 to 8 carbon atoms in the cyclic ring, monocyclic aromatic diols, bisphenols and hydrogenated bisphenols. In an embodiment of the present invention, the carrier is ethyleneglycol butyl ether, and the diol is diethylene glycol. The present invention also relates to a method of separating the dye from the water, carrier and diol components of the dye bath, by contacting the dye bath with particulate activated carbon.